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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/145,139 08/28/98 VORBACH

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EXAMINER

LM01/1221

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ART UNIT

PAPER NUMBER

2781

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12/21/99

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

09/145,139

Applicant(s)

VORBACH et al.

Examiner

Eric S. Thlang

Group Art Unit

2781



☒ Responsive to communication(s) filed on Oct 19, 1998

☐ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

## Disposition of Claims

☒ Claim(s) 1-25 and 27-47 is/are pending in the application.

Of the above, claim(s) \_\_\_\_\_ is/are withdrawn from consideration.

☐ Claim(s) \_\_\_\_\_ is/are allowed.

☒ Claim(s) 1-6, 15, 16, 18-25, and 27-42 is/are rejected.

☒ Claim(s) 7-14, 17, and 43-47 is/are objected to.

☐ Claims \_\_\_\_\_ are subject to restriction or election requirement.

## Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on \_\_\_\_\_ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on \_\_\_\_\_ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some\* ☒ None of the CERTIFIED copies of the priority documents have been  
☒ received.

☐ received in Application No. (Series Code/Serial Number) \_\_\_\_\_.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\*Certified copies not received: \_\_\_\_\_

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

## Attachment(s)

☒ Notice of References Cited, PTO-892

☒ Information Disclosure Statement(s), PTO-1449, Paper No(s). 2

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

— SEE OFFICE ACTION ON THE FOLLOWING PAGES —

### **Part III DETAILED ACTION**

1. Claims 1-47 are presented for examination.

#### ***Informalities - Objections Specification***

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

3. The claim of the disclosure is objected to because of the following informalities:

    The numbering of claims is not accordance with 37 CFR 1.126 which requires the original numbering of the claims to be preserved throughout the prosecution. When claims are canceled, the remaining claims must not be renumbered. When new claims are presented, they must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

    Misnumbered claim 26.

4. Acknowledgment is made of applicant's claim for foreign priority based on an application filed in Germany on 11 February 1997. It is noted, however, that applicant has not filed a certified copy of the German application as required by 35 U.S.C. 119(b).

### *Claim Rejections - 35 U.S.C. § 103*

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Subject matter developed by another person, which qualifies as prior art only under subsection (f) or (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the invention was made, owned by the same person or subject to an obligation of assignment to the same person.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103© and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

6. Claims 1-6, 15-16, 18-25 and 27-42 are rejected under 35 U.S.C. § 103 as being unpatentable over Barker et al. (U.S. 5,717,943) in view of Feeney et al. (U.S. 5,617,547).

7. As per claims 1, 16 and 28, Barker et al. teaches a bus system for a unit [see fig. 1A; fig. 13A], comprising a plurality of electrically independent bus segments [see ]; a plurality of nodes separating the bus segments and actively connecting and disconnecting at least two of the plurality of bus segments via at least one of a gate [see col. 20; col. 46, lines 27-45; figure 14], a driver [see fig. 13B], and each of

nodes including a respective routing table storing setup information for connections [see col. 7, lines 41-52; col. 20; fig. 6, element 313]. Barker et al. does not explicitly teach the plurality of bus segments via a switching element, a register and a respective monitoring unit independently verifying whether a connection can be set up. Feeney et al. (5617547) teaches a switching element [see fig. 1, element 30], a register [see fig. 6, element 54] and a respective monitoring unit independently verifying whether a connection can be set up [see fig. 8, element 70].

8. Barker et al. and Feeney et al. are combinable as being from the same field of endeavor and the same problem solving area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Feeney et al. within the system of Barker et al. because the object of Feeney et al's teachings is to provide the capability of communicating with the switch network in a way that maintains the bus addresses consistent across the network, and provide the means for extending a limited bus system architecture to thousands of I/O device taps by using electronic switches to interconnect multiple busses.

9. As per claims 2 and 19, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the unit has a multi-dimensional cell architecture [see col. 35, lines 3-23; col. 37, lines 48-67].

10. As per claims 3 and 20, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches a plurality of CPUs in a multi-dimensional [see figure 10].

11. As per claims 4 and 21, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches a plurality of arithmetic logic units in a multi-dimensional arrangement [see fig. 10; fig. 8; column 3].
12. As per claims 5, 6, 22 and 23, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches programmable gate array and a dynamically configurable gate array [see col. 49, lines 24-37; column 3; claims 46].
13. As per claim 15, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches a program loading unit performs at least one of a configuration and a reconfiguration for each one of the plurality of nodes [see col. 49, lines 43-57; col. 59, lines 47-61].
14. As per claim 18, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the plurality of bus segments are connectable in a plurality of configurations [see col. 59, lines 47-61; col. 35, lines 3-32]. However, Barker et al. does not explicitly teach a method for transmitting data in module, which comprising the step of transmitting the data with synchronization via a plurality of bus segments of a multi-dimensional bus system. Feeney et al. teaches a method for transmitting data in module, which comprising the step of transmitting the data with synchronization via a plurality of bus segments of a multi-dimensional bus system [see figure 6; col. 7, lines 49-67].

15. Barker et al. and Feeney et al. are combinable as being from the same field of endeavor and the same problem solving area. It would have been obvious to one of ordinary skill in the art at the time the invention was made to employ the teachings of Feeney et al. within the system of Barker et al. because the object of Feeney et al's teachings is to provide a precise real-time transmitting of data over a network and without delaying in response time.

16. As per claim 24, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the plurality of bus segments are permanently connected to a continuous bus system without delays [see col. 47, lines 1-14].

17. As per claims 25 and 27, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the plurality of bus segments are switched by a plurality of registers, each one of the plurality of registers having a time delay and an arbitration [see col. 3, lines 5-50; col. 15, lines 34-67].

18. As per claims 29, 30 and 32-34, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches a unique determinable relative address and setting up the bus segments as a function of the unique address [see col. 43, lines 11-36; col. 64, lines 11-67].

19. As per claim 31, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the changing direction if a blockage is encountered [see col. 72, lines 59-67; col. 73, lines 1-2].
20. As per claims 35-36, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches plurality of requests to a plurality of nodes [see col. 48, lines 35-53].
21. As per claims 37-40, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the step of providing a first acknowledgment from the node [see col. 48, lines 5-53].
22. As per claims 41-42, Barker et al. teaches all claimed limitations as applied to claims above. Furthermore, Barker et al. teaches the step of establishing a connection via at least one bus segment of the plurality of bus segments and at least one node of the nodes; and disconnecting the connection as a function of an interrupt signal [see col. 15, lines 42-67; claims 16,27,30,74].
23. Claims 7-14, 17 and 43-47 are objected to as being dependent upon a rejected base claim, it would be allowable if written in and independent form including all of the limitations of the bases claim and any intervening claims.



### *Conclusion*

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

The references are cited in the Form PTO-892 for the applicant's review.

25. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Eric S. Thlang whose telephone number is (703) 305-4004. The examiner can normally be reached on Monday - Thursday from 7:00 a.m. to 4:30 p.m. The examiner can also be reached on alternate Fridays during the same hours.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ayaz R. Sheikh, can be reached on (703) 305-9648. The fax phone number for this Group is (703) 308-9051 or (703) 308-9052.

Communications via Internet e-mail regarding this application, other than those under 35 U.S.C. 132 or which otherwise require a signature, may be used by the applicant and should be addressed to [**Ayza.Sheikh@uspto.gov**].

All Internet e-mail communications will be made of record in the application file. PTO employees do not engage in Internet communications where there exists a possibility that sensitive information could be identified or exchanged unless the record includes a properly signed express waiver of the confidentiality requirements of 35 U.S.C. 122. This is more clearly set forth in the Interim Internet Usage Policy published in the Official Gazette of the Patent and Trademark on February 25, 1997 at 1195 OG 89.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Group receptionist whose telephone number is (703) 305-3900.

THLANG, *East*  
December 16, 1999

*Ayaz R. Sheikh*  
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